

CLAIM AMENDMENTS:

Claims 1-29 (cancelled)

30. (new) A leaf for a multi-leaf collimator to delimit a high-energy beam of an irradiation device, in particular for conformation irradiation, wherein the multi-leaf collimator comprises a plurality of mutually opposite leaves which can be brought into a beam path via drives such that a contour of the beam path can be shaped in accordance with a volume to be irradiated, the leaf comprising:

a beam-absorbing material of appropriate thickness and disposed substantially only in a region which can enter into the path of the high-energy beam in all possible adjustment positions of the leaf.

31. (new) The leaf of claim 30, wherein the leaf comprises an other region which does not absorb the beam, said other region consisting essentially of an other material having a lower specific weight than said beam-absorbing material and also having good mechanical properties.

32. (new) The leaf of claim 30, wherein said beam-absorbing material is tungsten.

33. (new) The leaf of claim 31, wherein said other material is steel.

34. (new) The leaf of claim 31, wherein said beam-absorbing material is joined to said other material such that, in a front position of the leaf, said other material is still slightly outside of an outermost possible delimitation of the high-energy beam.

35. (new) The leaf of claim 31, wherein said beam-absorbing material is joined to said other material, thereby forming angles.
36. (new) The leaf of claim 31, wherein said beam-absorbing material is introduced into a recess in said other material such that said beam-absorbing material is surrounded by said other material at three sides.
37. (new) The leaf of claim 36, wherein the leaf consists essentially of a rear part of said other material and a front part of said beam-absorbing material and further comprising a first narrow elongated part joined at a top of the leaf and a second narrow elongated part joined at a bottom of the leaf, wherein said first and said second parts constitute a guiding part and a driving part.
38. (new) The leaf of claim 37, wherein said first and said second narrow elongated parts consist essentially of said other material.
39. (new) The leaf of claim 31, wherein said beam-absorbing material and said other material are soldered together.
40. (new) The leaf of claim 39, wherein the leaf is produced through separation from a block which is designed like the leaf, but has a multiple width thereof.
41. (new) The leaf of claim 31, wherein said beam-absorbing material and said other material are glued together.

42. (new) The leaf of claim 37, wherein said first and second narrow parts are joined to said front and rear parts through tongue and groove joints.
43. (new) The leaf of claim 31, wherein said other material has openings.
44. (new) A multi-leaf collimator for delimiting a high-energy beam of an irradiation device, in particular for conformation irradiation, the collimator comprising:
- a plurality of mutually opposite leaves which can be brought into a beam path via drives such that a beam contour can be shaped in accordance with a volume to be irradiated, wherein each of said leaves comprises a beam-absorbing material of appropriate thickness only in a region which may enter into a path of the high-energy beam for all possible adjustment positions of the collimator.
45. (new) A multi-leaf collimator, the collimator having leaves designed in accordance with claim 31.
46. (new) A device for delimiting a high-energy beam, in particular for conformation irradiation, the device comprising:
- a multi-leaf collimator having a plurality of mutually opposite leaves which can be brought into a beam path via drives, such that a contour of the beam can be shaped in accordance with a volume to be irradiated; and
a further shielding to delimit a path of the high-energy beam, wherein said leaves each comprise a beam-absorbing

material of appropriate thickness only in a region which can enter into the path of the high-energy beam and which is not shielded by said further shielding at all possible adjustment positions of said leaves.

47. (new) The device of claim 46, wherein said further shielding is disposed in front of said multi-leaf collimator.
48. (new) The device of claim 46, wherein said further shielding is disposed behind said multi-leaf collimator.
49. (new) The device of claim 46, wherein said further shielding is a shielding collimator having an adjustable opening.
50. (new) The device of claim 49, wherein said shielding collimator comprises two radiation delimiting elements which can be brought into different positions.
51. (new) The device of claim 50, wherein said radiation delimiting elements comprise beam-absorbing material of corresponding thickness only in a region which can enter into a path of the high-energy beam collimator at all possible adjustment positions of said shielding collimator.
52. (new) The device of claim 46, wherein dimensions of regions of said leaves are determined by maximum possible mechanical adjustment motions thereof.
53. (new) The device of claim 49, wherein dimensions of regions of said leaves are determined by a maximum mechanical opening of said shielding collimator.

54. (new) The device of claim 46, wherein dimensions of regions of said leaves are determined on a basis of a possible adjustment motions of said leaves as delimited by control technology.
55. (new) The device of claim 46, wherein dimensions of regions of said leaves are determined by adjustment motions of said shielding collimator as delimited through control technology.
56. (new) The device of claim 46, wherein each of said leaves comprises an other region which does not absorb the beam, said other region consisting essentially of an other material having a lower specific weight than said beam-absorbing material and also having good mechanical properties.
57. (new) An irradiation device, in particular for conformation irradiation, the device comprising:

means for delimiting a high-energy beam emitted by an irradiation source, said delimiting means having a multi-leaf collimator comprising a plurality of mutually opposite leaves which can be brought into a beam path via drives such that a contour of the beam path can be shaped in accordance with a volume to be irradiated, said delimiting means also comprising a further shielding for delimiting a path of the high-energy beam, wherein each of said leaves comprises a beam-absorbing material of appropriate thickness only in a region which can enter into a path of the high-energy beam and which is not shielded by said further shielding for all possible adjustment positions

58. (new) The irradiation device of claim 57, wherein each of said leaves comprises an other region which does not absorb the beam, said other region consisting essentially of an other material having a lower specific weight than said beam-absorbing material and also having good mechanical properties.